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ABSTRACT

This guide outlines various areas of concern to the National Highway Institute. They are: (1) the Institute's role including its mission, scope, functions, and relations with Federal Highway Administration Program offices, state and local governments, universities and technical institutes, and industry; (2) policies; (3) types of programs; (4) employee eligibility requirements; (5) location of courses; (6) fiscal considerations; (7) procedures for submission of program applications; (8) course technical directors and course coordinator responsibilities; and (9) feedback on course value. Various forms are included in the appendices. (JS)

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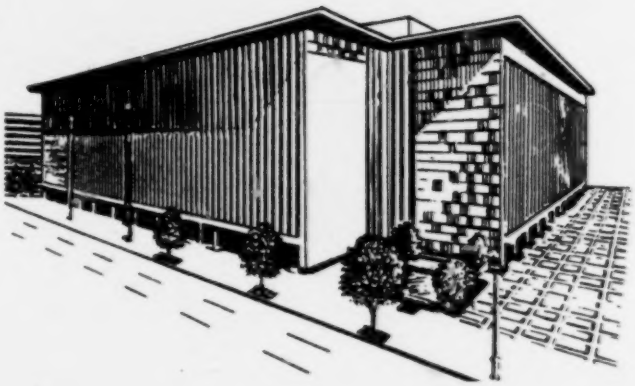

INFORMATIONAL GUIDE

FOR DEVELOPMENT AND ADMINISTRATION OF PROGRAMS OF EDUCATION AND TRAINING FOR PERSONNEL OF FEDERAL, STATE AND LOCAL HIGHWAY AGENCIES

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Issued January 1, 1972

U.S. DEPARTMENT OF TRANSPORTATION
Federal Highway Administration

U. S. DEPARTMENT OF TRANSPORTATION

FEDERAL HIGHWAY ADMINISTRATION

NATIONAL HIGHWAY INSTITUTE

INFORMATIONAL GUIDE

FOR DEVELOPMENT AND ADMINISTRATION OF PROGRAMS OF EDUCATION AND TRAINING FOR PERSONNEL OF FEDERAL, STATE AND LOCAL HIGHWAY AGENCIES

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PREFACE

The most valuable resource possessed by any organization is the knowledge and skills and resulting capability for work of its manpower. In highway transportation these terms "skill" and "knowledge" apply to anyone from the top administrator down through the entire work force of engineers and administrators responsible for planning, design, construction, maintenance and operations of highways, specialists in environmental conditions, rights-of-way, and on through the technicians and laborers.

The lack of adequate skills or the failure to use new knowledge as it becomes available results in poor planning, mistakes in construction, improper usage of materials, and results in highways which cost more than they should or which do not perform the service which they might be capable of giving. Through research and development we are in a period of rapidly changing knowledge of materials and equipment for construction, of demands of traffic and of an increasing awareness of the effect of transportation on our environment and our whole way of life.

As early as 1922 the late Thomas H. MacDonald is quoted in Engineering News Record as having said, "The establishment in Washington of a Bureau of Public Roads College is a desirable step to keep practicing highway engineers abreast with progress in the art." In order that advantage may be taken of new knowledge and skills, it is essential that persons employed in highway work have an opportunity for continuing their education. Also, any knowledge or skill, if not regularly used, like any other tool, will become rusty. It is, therefore, desirable to periodically review fundamentals.

The ceremony marking the end of high school or college education is called commencement, implying that graduates may have been exposed to fundamental knowledge and perhaps have developed a pattern of logical thinking, but that it is up to the organization employing these people to train them to become valuable in their work. In addition to continuing education for practicing engineers and others in highway work, it is, therefore, also necessary to conduct orientation courses for new employees in highway agencies.

It is recognized that many State and local highway agencies, many offices and branches of the Federal Highway Administration, and many universities, technical schools, trade associations and other segments of private industry have been and are conducting programs of continuing education in many fields pertinent to highway work. It is not the intention of the National Highway Institute to curtail or impede these programs. It is rather the hope of NHI to serve as a clearinghouse on information of opportunities in continuing education of interest to highway employees and to offer suggestions whenever possible on improvements of programs. It is also hoped that in certain areas where there is at present insufficient effort in continuing education that NHI may encourage the development of good programs.

The nature of the work of the Institute is such that guidelines will need to be periodically updated. Hence, the Informational Guide is assembled in loose-leaf form to allow substitutions of revised sections. It is also recognized that many State highway agencies already have excellent training programs and that for these organizations the Informational Guide will be of little value. It is hoped, however, that all interested agencies will find the guide worthwhile.

ROLE OF THE INSTITUTE

MISSION

As authorized in section 115 of the Federal-Aid Highway Act of 1970 (23 USC 321), the National Highway Institute will:

(1) Develop and administer, in cooperation with the State highway departments, training programs of instruction for Federal Highway Administration and State and local highway department employees engaged or to be engaged in Federal-aid highway work. Such programs may include, but not be limited to, courses in modern developments, techniques, and procedures, relating to highway planning, environmental factors, acquisition of rights-of-way, engineering, construction, maintenance, contract administration, and inspection.

(2) Administer the provisions of section 321(b) of Title 23 providing for partial payment of tuition and direct educational expenses of State and local highway department employees.

(3) Administer section 321(c) of Title 23 providing for grants and contracts with public and private agencies, institutions and individuals to provide education and training of Federal, State and local highway department employees.

(4) Administer section 115(c) of Public Law 91-605 which amends section 307(a) of Title 23 to provide grants for research fellowships for any purpose for which research is otherwise authorized by that section.

(5) Administer and conduct such other training and educational programs as are assigned to meet any additional training responsibilities of the FHWA.

ROLE OF THE INSTITUTE

SCOPE

The extent of the Institute's activity and influence will be evolutionary. Its initial role and beginning operations will involve the assumption of the administration of those highway and safety related courses of instruction which satisfy training needs of State and local government employees or common needs of State, local and Federal employees.

In its ultimate form, the Institute's scope will include the entire highway community through its role as the recognized center for advanced and specialized training in highway transportation engineering and related fields dealing with national highway problems affecting all levels of government. It will concentrate on providing skills and knowledge necessary for coping with the rapid growth of technology and the broadening social and environmental involvement of highway transportation.

ROLE OF THE INSTITUTE

FUNCTIONS

The Institute will have the responsibility to:

(1) CONTINUOUSLY ASCERTAIN AND INVENTORY TRAINING NEEDS AND RESOURCES AND COORDINATE ACTIVITIES IN THESE AREAS FOR FEDERAL, STATE AND LOCAL HIGHWAY EMPLOYEES, AS FOLLOWS:

(a) Assess Federal, State and local training requirements.

(b) Determine the extent to which State and local highway agencies needs and FHWA needs offer opportunity for common training.

(c) Devise, conduct or arrange for presentation of courses of study which will meet the greatest common areas of training needs existing at the Federal, State and local levels, and administer and conduct courses of instruction for FHWA employees.

(d) Review course content and methods of teaching, including texts and teaching aids, used in presently scheduled common courses and offer suggestions (if any) for improvement.

(e) Identify and appraise training activities within the range of interest of the Institute offered by universities, other Federal agencies, and State and local governments or by any other source, and maintain a current inventory of available training.

(f) Provide guidance to universities and other training institutions to aid in adjusting and establishing courses to meet current and future needs of highway departments.

(g) Detect duplicate or overlapping efforts in education or training now available to personnel in any one area and offer recommendations for their elimination.

(h) Encourage formation of Federal-State, interstate, and regional training councils or associations to identify and utilize available training resources for fulfillment of common training needs.

(i) Develop and maintain, in cooperation with the Office of Personnel and Training, FHWA, a library of teaching aids, including text and reference reading, movie films, slide presentations and exhibits.

(j) Explore methods of fully utilizing the Intergovernmental Personnel Act and other measures to provide for training opportunities for State and local highway department employees.

(k) Devise a procedure for measuring the benefit/cost ratio of any course.

(2) ASSIST THE STATES IN HIGHWAY RELATED EDUCATION AND TRAINING, AS FOLLOWS:

(a) Provide an information and promotional service to States concerning the range of training opportunities provided by P. L. 91-605.

(b) Assist State highway departments in developing and improving their training organizations to meet their unique training requirements.

(c) Analyze State and local government proposals for training and development of their employees under provisions of P. L. 91-605, and approve those proposals which meet Institute criteria.

(3) PERFORM OTHER TRAINING ADMINISTRATIVE FUNCTIONS AS REQUIRED TO FULFILL ITS ROLE:

(a) Identify courses being offered by FHWA and decide which of them may be offered under the auspices of the Institute.

(b) Provide for courses of instruction when it has been agreed by the Office of Personnel and Training, program offices, and the Institute that such courses are needed under Institute auspices to fulfill a training requirement of FHWA employees.

(c) Provide assistance through development, conduct and administration of programs furnishing education and training for foreign highway engineers and officials. Cooperate closely with the International Road Federation, Agency for International Development, World Bank and other agencies dealing with internationals.

(d) Take all necessary steps to insure that the quality of all courses of education and training offered for Federal, State or local highway employees is as high as possible.

ROLE OF THE INSTITUTE

RELATIONS WITH FHWA PROGRAM OFFICES

The National Highway Institute will coordinate very closely with FHWA program offices in development of courses and in determining where and how they are to be presented. Each Associate Administrator, Staff Office Director and Regional Federal Highway Administrator shall designate points of contact in his area of responsibility for program coordination.

The Office of Personnel and Training will continue to fulfill the functions concerned with career development and training of FHWA employees as now assigned except for the assumption by the National Highway Institute of responsibility for administration and conduct of highway related courses of instruction.

In the Institute the FHWA will have a unique facility for developing and conducting courses which meet needs shared in common by State and local and FHWA employees and through which they can be brought to a higher level of knowledge and skill. To take full advantage of this capability, the Institute and the Office of Personnel and Training will establish procedures for both formal and informal coordination of State, local and FHWA training needs, so that the Institute can concentrate its resources on requirements of the greatest mutual benefit to all the parties. In this relationship the Office of Personnel and Training will be expected to utilize fully the resources of the Institute in fulfilling FHWA's highway related training requirements. Where the Institute determines that it is not appropriate or desirable to offer training, the Office of Personnel and Training will continue to be responsible for providing such training by other means.

ROLE OF THE INSTITUTE

RELATIONS WITH STATE AND LOCAL GOVERNMENTS

The law requires that "training programs of instruction for Federal Highway Administration and State and local highway department employees engaged or to be engaged in Federal-aid highway work" shall be developed and administered in cooperation with the State highway departments. The Institute plans to use the resources of AASHO in establishing broad programs for developing of orientation or refresher training courses meeting identified requirements of State and local highway departments in general.

In most States newly employed engineers and eng neering technicians are given an orientation program. As part of such programs, it is very important that some formal classroom sessions be held. Eligible costs of such orientation schools may receive support from NHI. With information from States which have outstanding engineer-in-training programs, NHI will be able to help other States improve their programs.

Local, county and municipal highway agencies should communicate their requirements through the State highway departments. In each State the FHWA Division Engineer shall designate one of his staff to be the coordinator for all NHI activities within that State.

FHWA Regional Administrators should be kept informed of all NHI programs within their regions. Though State highway agencies will likely wish to discuss their training needs with FHWA field offices, they should feel free to communicate their training needs directly to the Institute or to transmit them through AASHO or other representative groups.

ROLE OF THE INSTITUTE

RELATIONS WITH UNIVERSITIES AND TECHNICAL INSTITUTES

One of the functions of NHI will be to provide guidance to universities and other training institutions to aid in adjusting and establishing courses to meet current and future needs of highway departments. Such courses might include:

(1) Regular graduate or professional level courses in engineering, city planning, business administration, or other areas in which employees of Federal, State or local highway agencies might enroll for credit toward an advanced degree. These would generally be regular university courses and it would be anticipated that only a few students from any highway agency would join other regular students in the classes.

(2) Special twilight or evening courses held on campus, at the graduate or professional level, for a group of students from one or more highway related agencies. To justify cost while providing maximum educational effectiveness, such a group should have an approximate minimum of 10 and a maximum of 30 students.

(3) Special courses at the graduate or professional level conducted by the university at the offices of the State highway agency. Such courses might be scheduled in late afternoon or twilight and be held with a minimum of time contributed by the employers of participants.

(4) Short courses, seminars, workshops or conferences held on specific subjects. Generally such courses would be jointly sponsored by a university, the State highway agency and possibly commercial or industrial agencies. No university credit would be given, but possibly certificates would be granted.

(5) Special courses for technicians in preparation for or to improve their capabilities for employment with State or local highway agencies. Subjects might include materials sampling, materials testing, inspection procedures, surveying, photogrammetry, computer programming, and other subjects where the work consists mostly of making of measurements and fact finding.

(6) Annual highway or transportation engineering conferences, jointly sponsored by a university and the State highway agency. Such conferences, currently held in many States, serve as a medium for the integration of all transportation interests within the State. They afford an opportunity for highway engineers; Federal, State, county and city officials; consulting engineers; contractors; materials and equipment representatives; university faculty and students; and all persons interested in roads and streets to get better acquainted and to exchange ideas on planning, designing, constructing, maintaining, operating, and managing our transportation facilities.

ROLE OF THE INSTITUTE

RELATIONS WITH INDUSTRY

Industry as used here refers to any nongovernmental organiza ion such as trade associations, professional management consultants, and other groups or individuals who offer courses in education and training which might be of value to employees of highway agencies. It is realized that within the past few years many excellent courses have been developed and conducted by such industry organizations.

An attempt will be made to identify, inventory and appraise educational and training activities within the range of interest of the Institute as offered by any of the industry organizations. Procedures will be established by which these courses can be made available to Federal, State and local employees. The role of the Institute will be to make sure that if Federal highway money is spent to allow highway employees to attend such courses that the course is of high quality, the criteria for admission reasonable, and that through feedback we are assured that participants are adequately benefitted through participation in the courses.

Other segments of the industry which play a very important part in the highway picture include the contractors and consulting engineers. With the ever increasing size and sophistication of construction equipment and continuous changes in specifications, it is essential that contractor supervisory personnel continue their education. Likewise, consulting engineers need to keep up with new developments. While the law establishing NHI specifically limits financing of programs to employees of Federal, State and local highway agencies, there would appear to be no objection to having contractors' personnel as participants in a course with governmental personnel, providing that Federal funds do not participate in costs attributable to them.

POLICIES

It is impossible at the inception of the program to set forth complete policy statements which would govern all situations. As questions or problems arise, statements of policy on administrative regulations, standards and procedures will be issued from time-to-time.

As a general policy, the suitability of any proposed program for receiving assistance from the National Highway Institute will depend on (1) a demonstrated need for the program and (2) that the program be of adequate quality and sufficiently comprehensive to serve the demonstrated need.

For most programs, it is expected that the teaching staff will be made up of experts representing multi-disciplinary interests. These teachers can be drawn from Federal, State and local highway agencies, universities and industry.

The primary function of programs which are developed or administered by the Institute will be to aid personnel in highway agencies to utilize new knowledge in their work. Programs might thus be, in effect, the third link in the chain of:

(a) Research--the finding of new knowledge.

(b) Development--the field testing and packaging or assembly of new knowledge into usable form.

(c) Application--through communications, the implementation of new knowledge by getting it into the minds of persons who can use it.

Proposed programs will be judged on their apparent potential to serve as effective communications.

In line with this general policy of aiding highway agency employees to keep abreast with or ahead of new developments, it is recognized that there is in the United States today much need for changing of our measuring units to the metric system. In all probability such a change will come about within the foreseeable future. In an effort to help in this transition to thinking in terms of metric measuring units it is recommended that, in all courses, units of measurements be given in both the metric and English systems.

TYPES OF PROGRAMS TO BE ENCOURAGED

Titles applied to efforts in continuing education for roadbuilding are many and varied, including such as conferences, seminars, workshops, symposia, short courses, etc.; and different titles are often used for the same type of program held in different parts of the country.

It will be the policy of the Institute to give assistance to any program which is designed to improve the knowledge and/or skills of any employees of Federal, State, or local highway agencies engaged or to be engaged in Federal-aid highway work. Such programs may vary in duration from 1-day conferences through 3- or 4-day workshops or seminars, to lengthy programs which might involve only a few people for as much as a year.

A few of the types of programs which might properly be of interest to the National Highway Institute would include the following:

(1) Orientation and training programs for engineering technicians who are to be employed as inspectors or surveyors on road or street construction.

(2) Refresher courses for construction inspectors to bring them up-to-date on latest developments in equipment, materials, and specifications.

(3) Orientation programs for newly employed engineers.

(4) Refresher courses for construction project engineers or supervisors on specifications, policies and procedures.

(5) Workshops for construction project engineers on new techniques as, for example, "use of CPM in construction scheduling."

(6) Workshops for highway maintenance foremen or supervisors on proper techniques of maintenance work and of maintenance inspections.

(7) Highway design. Many short courses on special aspects.

(8) Structure and hydraulic design. Many short courses on special subjects.

(9) Right-of-way. Many special subjects.

(10) Communications, both oral and written. Key to successful management of men. Courses in this subject might be at any level.

(11) Supervision. There is much need for teaching middle management people how to supervise the work of others.

(12) Top management. Many special courses on subjects pertinent to administrative management.

(13) Regular advanced professional or graduate college work carried by selected individuals of outstanding ability.

(14) Conferences which are designed to serve as a medium for integration of all transportation interests within a State.

There is an old adage that "clothes do not make the man, but they do present him." First impressions in any short course are just as important as first impressions when meeting a person. For any short course, workshop, seminar or other program it is recommended that a good outline in an attractive folder be given to all participants at the start of the program. A sample outline for a short course is included as Appendix III of this Informational Guide.

PERSONS ELIGIBLE TO PARTICIPATE IN PROGRAMS

Employees of the Federal Highway Administration and State and local highway agencies who are engaged or are to be engaged in Federal-aid highway work are eligible for training programs of instruction under the National Highway Institute provided they are nominated for training by their agencies. Persons who are not employees of any of the above listed governmental agencies may be permitted to participate in courses, but only if this is done at no cost to the Federal Government, and not so extensively as to dilute the training received by the governmental personnel.

For each separate course specific criteria of prerequisite capabilities must be specified. For example, a course might be designed for bridge engineers only, or for new technicians with a specific requirement that they be high school graduates, or for right-of-way appraisers.

WHERE COURSES MAY BE HELD

Courses may be held in buildings regularly occupied by offices of the Federal Highway Administration, State or local highway agencies, or in meeting rooms rented or otherwise made available for the purpose of housing the specific course. Continuing education facilities which are available at many universities generally offer excellent accommodations for continuing education programs and can appropriately be used. For certain types of programs, regular university classrooms may best fit the needs.

Certain highway courses can best be conducted in a building specifically built for that purpose with laboratory and testing facilities provided for class usage.

FISCAL CONSIDERATIONS

Funds for the operation of the National Highway Institute are to be derived from two sources.

Section 321 of Title 23, U. S. Code, establishing the National Highway Institute, prescribes under subsection (a) of that section that the "Institute shall develop and administer, in cooperation with the State highway departments, training programs of instruction for Federal Highway Administration and State and local highway department employees engaged or to be engaged in Federal-aid highway work." This subsection further prescribes that funds for carrying out the training programs outlined above shall be made available from sums authorized for deduction for administrative purposes by subsection (a) of section 104 of Title 23, U. S. Code, which permits the Secretary to deduct not to exceed 3-3/4 percent of all sums authorized to be appropriated for expenditure upon the Federal-aid system for administration. Therefore, the programs of instruction offered directly by the National Highway Institute will be funded through the normal budgetary processes of the Federal Highway Administration.

Subsection (b) of section 321 provides that not to exceed 1/2 of 1 percent of all funds apportioned for any fiscal year beginning after June 30, 1970, to any State for the Federal-aid primary and secondary systems, for extensions of the Federal-aid primary and secondary systems within urban areas and for the Federal-aid urban system, shall be available for expenditure by the State highway department subject to the approval of the Secretary for payment of not to exceed 70 percent of the cost of tuition and direct educational expenses (but not travel, subsistence, or salaries) in connection with the education and training of State and local highway department employees.

Subsection (c) of section 321 provides that where the education and training is to be paid for by the State out of 1/2 of 1 percent funds referred to in subsection (b), the education and training is subject to the approval of the Secretary and may be carried out through grants and contracts with public and private agencies, institutions and individuals, or may be conducted by the State agency.

The Program Analysis Division of the Office of Administration, FHWA, will issue a table reflecting the amounts available to each State for 1/2 percent training purposes listed separately by Federal-aid primary, secondary, and urban funds; rural primary and secondary; TOPICS and urban system funds. For purpose of maintenance of accounts, it is planned to use Form PR-37, Project Status Record, to provide automated data pertaining to both fiscal and program status information. FHWA division offices will review and make recommendations to the Director, National Highway Institute, concerning requests for expenditure of the 1/2 percent funds authorized by P. L. 91-605. More specific instructions will be furnished to FHWA division offices with respect to preparation of PR-37 after approval of the requested training or education by the NHI.

Subsection (c) of section 115 of the 1970 Act also provides authorization to the Secretary, "acting independently or in cooperation with other Federal departments, agencies, or instrumentalities, to make grants for research fellowships for any purpose for which research is otherwise authorized by" section 307(a) of Title 23, U. S. Code. Section 307(a) authorizes the Secretary to engage in research on all phases of highway construction, modernization, development, design, maintenance, safety, financing and traffic

conditions and provides that funds for that purpose may be taken out of section 104 authorizations. Therefore, research fellowships could be applied for as soon as funds are budgeted and appropriated specifically for them. The National Highway Institute would then prepare announcements describing such research fellowships and issue such regulations as necessary for administering them.

PROCEDURES FOR SUBMISSION OF APPLICATIONS FOR PROGRAMS

Instructions for the application and approval of requests for Federal-aid funds to be used for training under NHI auspices will be issued in the form of an FHWA directive. This directive will be made available to State highway departments and will contain specific directions for preparation of applications.

Copies of TENTATIVE sample application forms for group programs and for individual programs are included as Appendix I of these Informational Guides. Both State and local highway agency sponsored courses should be submitted through the office of the Division Engineer and the Regional Administrator of FHWA.

RESPONSIBILITIES OF COURSE TECHNICAL DIRECTOR AND COURSE COORDINATOR

The work of staging a successful short course, seminar, or workshop requires the handling of a multitude of details; and the accomplishment of each detail at the proper time. To assist course coordinators in accomplishing their work, a checklist is very helpful. A sample of such a checklist is attached as Appendix II of these Informational Guides.

The checklist is designed with the assumption that each program, whether a short course, seminar, workshop, or other type of program, will be designed to deal with one rather specific subject and that the number of participants admitted and the criteria for admission to any one program will be restricted.

For each course, there should be a technical director who will be responsible for course content, selection of subjects to be covered, selection of speakers, of text material and of visual aids. For each course there will also be a course coordinator who will make all arrangements for classrooms, registration of participants, assembly of notebooks, preparation and handling of quizzes, introduction of speakers, and other functions which might be included under "good housekeeping." In some courses the same person might handle both the responsibilities of technical director and course coordinator. However, if an organization conducts a large number of courses in one year, it will generally be more efficient to have a separate technical director for each course and to have one course coordinator to handle all of the courses.

In the suggested checklist (Appendix II), the letter "D" indicates the date of the course, hence "D - 6 mos." indicates activities which should be

completed 6 months in advance of the scheduled program; "D - 10 days" indicates activities which should be completed 10 days ahead of the date of the opening of the program; etc.

Explanations of certain items in the checklist are as follows:

D - 6 mos., Item 01, Steering Committee Meeting. For each program, the technical director will find it helpful to have a steering committee of two or three persons to work with him in developing the technical content of the program. At least one member of the steering committee might be from an outside organization. For example, in planning a short course for State bridge construction engineers, it would be helpful to have a contractor's engineer on the steering committee.

D - 4 mos, Item 15, Notebooks. Motivation of participants to get as much as possible out of any program is essential. Recognizing the importance of first impressions, it is recommended that at the opening of each course each participant be presented with a notebook for the course. The notebook should be of loose-leaf, three-ring variety of good quality. Having the individual participant's name in tapewriting on the cover of his notebook is a good first step in motivating the participant to take an interest in keeping good notes for the course.

D - 2 mos., Item 32, Certificates. Presenting to participants who complete a course of a suitable certificate serves as further motivation.

D - 2 mos., Item 36, Notebooks. The notebook should include the following:

Title of program

Statement of objectives of program

Hour-by-hour schedule of program, giving topics, speakers, movies, luncheons, and other breaks

List of speakers with complete titles

List of participants with titles and home addresses

Suggestions on notekeeping (see Appendix IV)

Plenty of blank paper for notekeeping

D - 30 days, Item 56, Quizzes. Daily quizzes form a good device for motivating participants to get a maximum out of any program. An effective type of quiz is included as Appendix V. Scheduling of a quiz for 15 or 20 minutes as the opening session of each morning, following the first morning, with instructions to the students to use their lecture notes for formulating answers is recommended. This process of forcing each student to rethink through the subject matter of the previous day's program will aid him in crystalizing in his mind the things which were really of most importance to him.

FEEDBACK

The most important question concerning any project (conference, workshop or short course) is perhaps the question, "Is it worth the cost?" The theory of benefit-cost ratio applies to a program of education or training just as well as it applies to any other proposed activity.

While the cost of planning, directing and conducting any program of continuing education is realtively easy to measure, the benefits are sometimes less tangible and more difficult to evaluate. It is quite important, however, when conducting any educational program to obtain feedback which will give the director answers to the questions: (1) Should the program be repeated? (2) If repeated, how can it be improved? Improvement might come through different procedures or teaching techniques, different speakers, different subjects, additional subject matter, or deletion of certain subject matter.

An evaluation made by participants at the end of a course on what they think they got out of the course is very helpful and should always be included as part of the course. The evaluation might be a very simple thing as demonstrated in a sample included as Appendix VI, where the participants are asked to rate the speakers on a numerical basis and to list the subjects in order of value to them. These two ratings put together enable the course director to evaluate the capabilities of the speakers and to some extent the value of the subjects.

A more comprehensive type of course appraisal is included under Appendix VII. In this appraisal, the participants are asked to rate many items concerning the program.

Another type of feedback is a measure of what the participant actually got out of the course. The daily quiz included as Appendix V serves very

well to measure the students success in comprehending the course. If these daily quizzes are carefully read by the course director, he can find out how well the students are mastering the subject matter and how well the instructors are succeeding in getting their ideas across.

This type of daily quiz also offers another value in that it is an excellent teaching technique. Requiring the students to sit down the day after a session and to think through the total subject matter of the previous day's program and to write out what they think they got out of the program forces them to crystalize in their own minds the things on the program which were really of most importance.

Appendix I-A

Form FHWA (Tentative)
NOT AUTHORIZED FOR USE

FEDERAL HIGHWAY ADMINISTRATION

NATIONAL HIGHWAY INSTITUTE

Request for Use of Federal-Aid Highway Funds for
Group Education or Training

1. State _____ 2. Date of Request _____

3. Course Title _____

4. Date(s) of Training _____ 5. Estimated Attendance _____

6. Agency sponsoring course _____

7. Cosponsor (if any) _____

8. Purpose and educational objectives of the program (be as specific as possible)

_____

_____

_____

9. Proposed course outline. Attach a copy of the course outline including a list of the subjects to be presented, the sequence of their presentation, the proposed speakers and the amount of time allowed to each subject. Also include the source material upon which the course is based, and the text books and collateral references to be used.

10. Proposed course schedule. Provide information on the length of the course, including the number of days, days of the week, and hours per day _____

_____

11. Criteria for eligibility of participants _____

_____

_____

12. Where will course be held? _____

_____

13. Is this offering a repeat of a course previously given? _____

If yes, when was it last held? _____

14. Will this program become a recurring program? _____ If yes, state frequency of offerings _____

15. Name and title of course technical director (responsible for technical content)

_____

16. Name and title of course coordinator (responsible for arrangements)

_____

17. Estimated Expenditures

a.	Text books	$_____
b.	Notebooks and supplies	_____
c.	Printing	_____
d.	Communications	_____
e.	Secretarial	_____
f.	Audio-visual	_____
g.	Photographs	_____
h.	Busses	_____
i.	Name tags	_____
j.	Meeting room rental	_____
k.	Meals and refreshments (as part of course)	_____
l.	Honoraria paid to outside instructors	_____
m.	Salary paid to sponsoring agency's staff for time spent in preparation and conduct of course	_____
n.	Other items (specify) _____	_____
	_____	_____
	_____	_____
	Total estimated costs (excluding travel, subsistence and salaries of attendees)	$_____
	Estimated cost per attendee	$_____

18. Estimated income

Total amount to be paid out of 1/2% Federal-aid funds	$_____
Total amount to be paid by State highway agency	$_____
Total amount to be paid by local highway agencies	$_____
Other income (specify) _____	$_____
_____	$_____
_____	$_____

Payment of Federal funds will be made after course is completed and full costs, record of attendance, and a general appraisal of the effectiveness of the course relative to meeting course objectives have been submitted.

Recommended: _____ Division Engineer, FHWA _____ Date

Recommended: _____ Reg.Fed.Hwy.Admin.,FHWA _____ Date

Approved: _____ Director, NHI _____ Date

Appendix I-B

Form FHWA (Tentative)
NOT AUTHORIZED FOR USE

FEDERAL HIGHWAY ADMINISTRATION

NATIONAL HIGHWAY INSTITUTE

Request for Use of Federal-Aid Highway Funds for
Individual Education or Training

1. State _____ 2. Date of Request _____

3. Name of Participant _____

4. Position _____

5. Course Title _____

6. Date(s) of Training _____

7. Agency sponsoring program (generally a university or technical school)

_____

8. Address of agency _____

9. Purpose. A brief statement of the purpose and specific objectives of the program. This will include the need for the training and how this course relates and contributes to the career development and better performance of the duties of the nominee. _____

_____

_____

_____

_____

_____

10. Program outline. Include a program prospectus. _____

_____

11. Name and title of academic advisor for program. _____

_____

12. Estimated Expenditures

a. Tuition.....	$_____
b. Text books	_____
c. Notebooks and supplies.....	_____
d. Other items (specify) _____	_____
_____	_____
_____	_____
_____	_____
Total estimated costs (excluding travel, subsistence and salary of attendee	$_____

13. Division of costs

Total amount to be paid out of 1/2% Federal-aid funds	$_____
Total amount to be paid by State highway agency	$_____
Total amount to be paid by local highway agency	$_____
Other (specify) _____	$_____
_____	$_____
_____	$_____

Payment of Federal funds will be made after program is completed and full costs, record of attendance, and a record of academic achievement and the effectiveness of the program relative to meeting program objectives have been submitted.

Recommended: _____ Division Engineer, FHWA _____ Date

Recommended: _____ Reg.Fed.Hwy.Admin.,FHWA _____ Date

Approved: _____ Director, NHI _____ Date

Appendix II

FEDERAL HIGHWAY ADMINISTRATION

NATIONAL HIGHWAY INSTITUTE

SUGGESTED CHECKLIST
FOR PLANNING AND DIRECTING THE PROGRAM OF A
SHORT COURSE, SEMINAR OR WORKSHOP

COURSE TITLE _____

AGENCY CONDUCTING COURSE _____

WHERE TO BE HELD _____ WHEN _____

ITEM	WHO TO DO	DATE NEEDED	DATE DONE
D - 6 mos.			
01. Steering Committee Meet			
a. Set time, place, duration of program			
b. Choose theme and course content			
c. Prepare first draft outline of course			
d. List several possible speakers for each subject			
02. Determine maximum number of participants to be admitted			
03. Determine criteria for eligibility for admission			
04. Prepare and submit request for NHI approval.			
05.			
06.			
07.			
D - 4 mos.			
11. Arrange for needed meeting and guest rooms, confirm in writing			
12. Arrange for formal meals			
13. Reserve needed movie films and slides			
14. Order textbooks and other hand-out literature			

ITEM	WHO TO DO	DATE NEEDED	DATE DONE
5. Order notebook covers			
6. Initiate publicity of program to attract participants			
7. Invite speakers - by phone, confirm in writing			
8. Prepare requests if needed for permission for each staff man of the sponsoring organization to serve as an instructor			
19. Prepare registration forms			
20.			
21.			
22.			
D - 2 mos.			
31. Prepare detailed program schedules			
32. Have certificates printed, if to be used			
33. Have name tags prepared			
34. Arrange for bus transportation as needed			
35. Invite special guests to luncheon or dinner			
36. Assemble notebooks			
37.			
38.			
39.			
D - 30 days			
51. Send speakers detailed program giving subject, clock time, information on projectors, chalkboard, etc. Ask speakers for handouts to be of standard notebook size and prepunched. Ask speakers for copies of talks.			
52. Arrange for group photo			
53. Arrange for projection equipment and operators			

ITEM	WHO TO DO	DATE NEEDED	DATE DONE
54. Arrange for P.A. system, if needed			
55. Advise accepted registrants what to bring			
56. Prepare quizzes			
57.			
58.			
59.			
D - 10 days			
61. Recheck notebooks to make sure that an adequate number are complete and ready			
62. Arrange menus for scheduled meals, estimate number of attendees			
63. Prepare identification tags			
64. Prepare table name cards			
65. Reminder to speakers - invite to luncheons or dinners			
66. Arrange for coffee breaks			
67. Double check to see that all speakers have accepted			
68.			
69.			
70.			
D - 1 day			
71. Guarantee number of meals			
72. Double check on P.A. system and projectors			
73. Check with photographer			
74.			
75.			
76.			

ITEM	WHO TO DO	DATE NEEDED	DATE DONE
D - Day			
81. Have roll cards filled in, names exactly as wanted on certificates			
82. Have group photograph taken			
83. Have names lettered on certificates			
84. Take roll daily, organization names as well as individuals			
85. Names to identify group photograph			
86. Each day check up on following day's speakers by phone			
87. On last day of course have students evaluate course and speakers (see Appendix VI)			
88. On last day - present certificates and group photographs			
89.			
90.			
D + Few days			
91. Prepare summary report and evaluation of course			
92. Thank you letters			
93.			
94.			
95.			

SHORT COURSE ON FUNDAMENTALS OF CONSTRUCTION SUPERVISION

Conducted by

THE DEPARTMENT OF CIVIL ENGINEERING
OF THE OHIO STATE UNIVERSITY

In cooperation with

THE OHIO CONTRACTORS ASSOCIATION

Course No. CE-56

in a series concerning
MANAGEMENT OF
ENGINEERING CONSTRUCTION

Classes to be held at the
OHIO STATE UNIVERSITY
CENTER FOR TOMORROW
2400 Olentangy River Road
Columbus, Ohio 43202
Phone 614-228-8800

Classes to start
10:00 A.M. - Monday
January 4, 1971

To close
1:30 P.M. - Friday
January 8, 1971

OBJECTIVE OF SHORT COURSE

Management of construction will be considered successful if a project is completed in the available time at the lowest cost. The accomplishment of such results will depend upon the abilities of supervisors and foremen to understand and wisely use their knowledge of four principal factors: materials, machinery, money and men. They add up to Management.

The supervisor must understand the characteristics of all materials which are being used in what he is building and the processes and handling techniques necessary in assembling these materials. The supervisor must understand the capabilities and limitations of machinery and equipment and must be able to select, schedule and direct the use of this machinery for efficient production. He must be aware of costs of materials, equipment and manpower on his job.

The supervisor must also understand, and perhaps this is his most important responsibility, the capabilities of his personnel and must know how to effectively motivate and guide the work of his men. The supervisor can accomplish results only through the work of others and hence he will succeed only in proportion to his ability to communicate his ideas to others.

The objective of this course is to review certain fundamentals of construction supervision and to help supervisors in improving their ability to communicate in the language of construction. Better communications will assist the construction supervisor or foreman in carrying out his responsibilities of obtaining harmonious working relationships and will result in better job efficiency, safety and productivity.

Hour	Subject	Speaker
A.M.		
9:30	REGISTRATION - Coffee served	
10:00	OPENING REMARKS	Rothermund
10:10	COURSE OUTLINE, TEXT, NOTES, ETC.	Karrer
PART I	THE CHANGING PICTURE OF ENGINEERING CONSTRUCTION	
10:20	A. THE PROFESSION OF CONSTRUCTION SUPERVISION	Karrer
	1. A most important job in today's way of life -	
	2. Application of knowledge -	
	3. Science to Engineering Design to Engineering Construction -	
10:25	B. OUR INCREASING CAPACITY FOR CONSTRUCTION	
	1. Developments in construction equipment -	
	2. Machines are only as efficient as men who manage them -	
10:50	C. CONSTRUCTION - A MANUFACTURING PROCESS	
	1. Assembly and processing of raw materials to produce something of value to mankind -	
	2. Today's complex jobs must be built by a well informed and well coordinated team -	
11:00	D. ADMINISTRATION OF CONSTRUCTION	
	1. Slave labor -	
	2. Force account -	
	3. Negotiated contract -	
	4. Competitive bid contract -	

Monday, January 4, 1971 CE-56

Hour	Subject	Speaker
A.M.		
PART II	CONSTRUCTION MANAGEMENT - WHAT IT IS AND HOW IT WORKS	
11:10	A. RESPONSIBILITIES OF THE SUPERVISOR TO THE OWNER	Krauser
	1. Function of the States Project Engineer in Administering a project -	and
	2. Duties of the States Inspectors -	Leathers
	3. U.S. Bureau of Public Roads Inspections -	
11:30	Lunch (on your own)	
P.M.		
12:30	B. RESPONSIBILITY OF THE SUPERVISOR TO HIS BOSS	Preston
	1. Goal, to build job in available time at lowest cost -	and
	2. Must plan, organize, motivate and control -	Karrer
	3. To the laborers the supervisor is the company -	
1:00	C. THE SUPERVISORS POSITION ON THE MANAGEMENT TEAM	Karrer
	1. The man with the bull whip? -	
	2. The man who is skilled in the art of supervising and directing the work of others -	
	3. The first line of management - The Contractor's voice in the field -	
	4. The leader of a well organized team -	
1:10	D. WHAT THE SUPERVISOR SHOULD KNOW ABOUT HIS JOB	Karrer
	1. Materials -	and
	2. Machinery -	Preston
	3. Men -	
	4. Money -	
1:45	Recess	

Monday, January 4, 1971 CE-56

Hour	Subject	Speaker
P.M.		
PART III	KNOWING WHAT YOU ARE TO BUILD	
2:00	A. THE PLANS	Catlin
	1. Understanding their intent -	and
	2. Checking for Errors and Mistakes -	Preston
	3. Preparing supplemental drawings -	
3:00	B. THE SPECIFICATIONS	Eckert
	1. Standard Specs -	and
	2. Supplemental Specs -	Karrer
	3. Special Provisions -	
4:00	School is out.	
5:30	ATTITUDE ADJUSTMENT HOUR	
6:00	DINNER	
	"The Importance of Continuing Education for Construction Supervision"	Rothermund
7:00-9:00	Study of reading assignments.	

Tuesday, January 5, 1971 CE-56

Hour	Subject	Speaker
A.M.		
8:30	Quiz on previous day's work.	
PART IV	SCHEDULING OF CONSTRUCTION ACTIVITIES	
8:45	A. THE BAR GRAF OR GANTT	Karrer
	1. Importance of thinking the job through -	and
	2. Communicating your thoughts to others -	Chapman
9:00	B. CRITICAL PATH AND SEQUENCE DIAGRAMMING	
	1. A new tool for construction scheduling -	
	2. Fundamentals of arrow diagramming -	
	3. A graphical picture of your thinking -	
	4. Phase ONE of CPM, diagramming -	
	5. Illustration of CPM -	
	6. Phase TWO of CPM, the critical path -	
	7. Phase THREE of CPM, time-cost relationships -	
	8. Phase FOUR of CPM, monotoring the work -	
	9. Sequence diagramming -	
9:45	Coffee break	
10:00	B. Cont'd.	
11:30	Lunch	
P.M.		
12:30	C. THE MATERIAL DELIVERY SCHEDULE	Dornbush
	1. Anticipating needs - what, when and where -	and
	2. Varification of quantities -	Frantz
	3. Inspection of quality -	

Tuesday, January 5, 1971 CE-56

Hour	Subject	Speaker
P.M.		
1:15	D. THE EQUIPMENT USE SCHEDULE	Rosencrans
	1. The Cost of Lost Production -	and
	2. The Cost of Equipment when in use and when idle -	Hanna
	3. Provision for equipment maintenance -	and
	4. Measuring the productivity and efficiency of your equipment -	Frantz
3:00	E. USE OF TIME-LAPSE PHOTOGRAPHY IN STUDYING OF EQUIPMENT PERFORMANCE.	Aikman
3:30	Recess	
3:45	F. THE LABOR SCHEDULE	Reinhart
4:15	G. KEEPING MEANINGFUL RECORDS	Frantz
4:30	School is out.	
7:00 - 9:00	Study of reading assignments.	

Wednesday, January 6, 1971 CE-56

Hour	Subject	Speaker
A.M.		
8:30	Quiz on Previous Day's work	
PART V	CONSTRUCTION SURVEYING	
8:45	A. CONSTRUCTION STAKES AND THEIR USE	Johnson
	1. Centerline Control -	and
	2. Cross-section Control -	Karrer
	3. Slope Control -	
9:45	Coffee Break	
10:00	4. Trench and ditching control -	
	5. Culvert Layout -	
	6. Bridge Layout -	
	7. Pavement surface control -	
11:30	Lunch	
12:30 PART VI	TRIP THROUGH STATE HIGHWAY TESTING LABORATORY	Williams

Participants will be transported by bus to the Testing Laboratory of the Ohio Department of Highways at 1620 W. Broad Street in Columbus.

Testing procedures for soils, bituminous materials, portland cement concrete, reinforcing steel, culvert pipe and miscellaneous materials will be observed.

Thursday, January 7, 1971 CE-56

Hour	Subject	Speaker
A.M.		
8:30	Quiz on previous day's operations	
PART VII	APPLIED ENGINEERING FUNDAMENTALS	
8:45	A. NEW DEVELOPMENTS IN EXCAVATION AND EMBANKMENT CONSTRUCTION	Shepard
	1. Fundamentals of soil behavior -	and
	2. Fundamentals of earth moving -	Gray
9:45	Recess	
10:00	B. NEW DEVELOPMENTS IN RIGID PAVEMENT CONSTRUCTION	Dudley
		and
11:30	Lunch	Dixon
12:30	C. NEW DEVELOPMENTS IN FLEXIBLE PAVEMENT CONSTRUCTION	Wilkinson
		and
2:00	Recess	Gibbony
PART VIII	SAFETY	
2:15	Movie: The Roll of Drums	
2:35	A. THE COST OF ACCIDENTS	Gotter
3:00	B. THE CAUSES OF ACCIDENTS	and Freed
3:30	C. GOOD HOUSEKEEPING ON THE JOB	
4:00	School is out.	
7:00-9:00	Study Homework assignment.	

Friday, January 8, 1971 SC-56

Hour	Subject	Speaker
A.M.		
8:30	Quiz on previous day's work.	
8:45	PART IX ORGANIZING YOUR JOB	
	A. KNOWING YOUR OBJECTIVES	Karrer
	B. SELECTION OF CREW	
	C. DEFINING OF DUTIES AND RESPONSIBILITIES	
	D. ASSIGNING OF AUTHORITY WITH RESPONSIBILITY	
	E. KEEPING ADEQUATE RECORDS	
	PART X MOTIVATING YOUR MEN	
9:00	A. YOU AND YOUR MEN	Logan
	What employees want -	
	Why understanding others is important -	
	B. HOW DO PEOPLE GET THAT WAY	Logan
	The forces that mold personality -	
	Heredity and environment -	
	A man's family -	
	Feelings play an important part -	
	C. WHAT PERSONALITY CONSISTS OF	Logan
	The conscious -	
	The unconscious -	
	The conscience -	

Friday, January 8, 1971 SC-56

Hour	Subject	Speaker
A.M.		
9:20	D. HOW PERSONALITY AFFECTS BEHAVIOR	Logan
	Attitude -	
	Safety -	
	E. YOU TOO	
	Do you see yourself as others see you -	
	F. THE SUPERINTENDENT'S ROLE IN LEADING HIS MEN	
	What work means to a man -	
	What it takes to make a team -	
9:45	Recess	
PART XI	INSTRUCTING NEW EMPLOYEES	
10:00	A. THE ART OF TEACHING	Logan
	B. DEMONSTRATION OF TEACHING METHODS	
10:30	C. HOW TO INSTRUCT	
	D. PREPARING YOURSELF TO INSTRUCT	
PART XII	CONTROLLING THE WORK	
11:00	A. FLEXIBLE STABILITY IN YOUR DAY-TO-DAY SCHEDULE	Karrer
	B. KEEPING CONTROL OF CURRENT COSTS	
	C. MAKE YOUR MEN THINK "SAFETY"	
	D. TEAMWORK AND MORALE	

Friday, January 8, 1971 SC-56

Hour A.M.	Subject	Speaker
	PART XIII COMMUNICATIONS - KEY TO SUCCESSFUL SUPERVISION	
11:20	A. DOWN - KEEP YOUR MEN INFORMED	Karrer
	B. UP - KEEP THE BOSS INFORMED	
	C. BUT, GET THE JOB DONE	
11:25	Final Exam	
12:00	CLOSING LUNCHEON	
	Introduction of guests	Karrer
	Remarks	Converse
	Presentation of certificates	Bolz

LIST OF SPEAKERS IN ALPHABETICAL ORDER, SC-56

Alan Aikman, Asst. Instructor, Dept. of Civil Engineering, OSU

Harold A. Bolz, Dean, College of Engineering, OSU

Russel E. Catlin, Engineer of Location and Design, ODH

John Chapman, Chief Engineer, Visintine and Co.

Frank P. Converse, Jr., Great Lakes Construction Co. and
President of the Ohio Contractors Assn.

John C. Dixon, Rigid Pavements Engineer, Bureau of Construction, ODH

John C. Dornbush, Asst. Vice President, Whitaker-Merrell Co.

S.W. Dudley, Senior Paving Engineer, Portland Cement Association

Paul J. Eckert, Asst. Engineer of Construction, ODH

Jacque Frantz, Frantz Bros., Inc.

Leonard Freed, Manager, Safety and Member Services, Ohio Contractors Assn.

Willis B. Gibboney, Flexible Pavements Engineer, Bureau of Construction, ODH

Hamilton Gray, Chairman, Dept. of Civil Engineering, OSU

Wilbur Gotter, Safety and Personnel Manager, The John G. Ruhlin Const. Co.

Clare Hanna, Terex Division, General Motors

Ward Johnson, B.G. Danis Company

Emmett H. Karrer, Professor of Civil Engineering, OSU

H. L. Krauser, Chief Engineer, Bureau of Construction, ODH

Rex C. Leathers, Division Engineer, Federal Highway Administration

William B. Logan, President, Webber College

Burton Preston, The Purdy Construction Co.

Charles W. Rinehart, Manager, Industrial Relations, Ohio Contractors Assn.

Gordon Rosencrans, W.W. Williams Co.

Karl L. Rothermund, Jr., Executive Director, Ohio Contractors Association

Charles H. Shepard, Soils Engineer, Bureau of Construction, ODH

Robert A. Wilkinson, District Engineer, Asphalt Institute

Frank M. Williams, Chief, Bureau of Tests, ODH

CE-771 CONSTRUCTION PLANNING, EQUIPMENT & METHODS 1-8-68 1/

SOME SUGGESTIONS ON NOTEKEEPING

by

Emmett H. Karrer

The principal value of notes is their retention of information to back up the memory. This is true whether notes are made in class to cover high points of a lecture, made in the field to record observations, including measurements, or made while visiting some plant or project to record what was being done.

To be of value, notes should be sufficiently clear so that they can be properly interpreted by a person other than the one who prepared the notes. They should also be sufficiently complete to enable the person who prepared the notes to recall all important facts concerning the situation long after the notes are cold.

To afford some practice in notekeeping a set of notes is required for course CE-771. The assembled notes are to be submitted at the close of the quarter at which time they will be graded and will be counted for five percent of the quarter's credit.

The following suggestions are offered:

(a) Notes should be organized so that anything in them can be found after they are cold. This organization may be done by page numbers with an index, or by dividing the notes into sections as, for example, class lecture notes, homework problems, reports on field trips, literature, etc.

(b) The notes are the property of the student. The cover page of the notes should include the course number, date and the student's name; not the instructor's name.

(c) Generally during lectures the student will jot down a few high point words and phrases. An excellent way of reviewing lecture notes is to take the rough notes while they are still warm after a lecture and translate them into readable English.

(d) Literature may be bound in the notes if thin and standard page size; otherwise, it is suggested that the literature be kept separate and simply be listed in the notes.

(e) Any maps or large sheets included in the notes should be folded down to bind in the notes and should be bound in such a manner that they can be unfolded for ready examination.

(f) Homework problems will become part of your notes. To be of value in later years, it is important that in solving any homework problems you leave your tracks. The source of information should be shown, whether given in the statement of the problem or assumed, and, if assumed, the basis of assumption should be stated. All calculations should be shown in sufficient detail so that you could resolve the problem at any time later. Results should have handles on them, ie; they should be clearly marked and should be identified in units, as feet, miles, pounds or whatever. Homework problems should have uniform headings indicating course number, problem number, date and student's name.

Appendix V

THE OHIC STATE UNIVERSITY
DEPARTMENT OF CIVIL ENGINEERING
CONTINUING EDUCATION

NAME_____

QUIZ NO._____

DATE_____

Please list below (and on continued sheets as needed) the subjects on yesterday's program which you found of most interest and value to you. Briefly state why. List items in order of value.

O.S.U. - CIVIL ENGINEERING SHORT COURSE
SPEAKER & SUBJECT EVALUATION

Name_____
Date_____
Course No. ____

SPEAKER RATING

10 points for	best speaker	Name_____
9 " "	second best speaker	Name_____
8 " "	third " "	Name_____
7 " "	fourth " "	Name_____
6 " "	fifth " "	Name_____
5 " "	sixth " "	Name_____
4 " "	seventh " "	Name_____
3 " "	eighth " "	Name_____
2 " "	ninth " "	Name_____
1 " "	tenth " "	Name_____

SUBJECT RATING
List the subjects which you think were best presented.

1.

2.

3.

4.

5.

PROGRAM IMPROVEMENT
To help us to improve the program, if it is repeated another year, please list subjects on which you would like to have more time spent.

DATE_____

COURSE APPRAISAL
OHIO STATE UNIVERSITY SHORT COURSE NO.____

Your comments and constructive suggestions will be of considerable value in the preparation of future programs. Please answer each question accurately. If more space is needed, use an additional sheet. Your signature is optional.

1. Please rate the over-all value and significance of the course to you.

   ( ) Excellent ( ) Good ( ) Fair ( ) Poor

2. Was the level of difficulty of the instruction and discussion suited to your requirements?

   ( ) Too High ( ) About Right ( ) Too Low

3. Was the time assigned to each topic about right?

   ( ) Yes ( ) No

   Explain:

4. Should additional subjects have been included?

   ( ) Yes ( ) No ( ) No Comment

   Specifically what:

5. Should some topics have been reduced or eliminated?

   ( ) Yes ( ) No ( ) No Comment

   Explain:

6. Was the length of the course proper for your requirements?

   ( ) Yes ( ) No ( ) No Comment

7. Has the administration of the Program and assistance you have received been satisfactory?

( ) Yes ( ) No.

Explain:

8. Are the objectives of the course proper and suitable to your future work requirements?

( ) Yes ( ) Partially ( ) No

9. Have the stated objectives of the course been reasonably accomplished in the time available?

( ) Yes ( ) No.

10. Has the method of presentation of the subjects been proper and suited to your requirements?

( ) Yes ( ) No ( ) No Comment

11. What comments do you have relative to physical facilities, i.e., lodging, classroom, and meals provided?

12. What constructive suggestions would you offer for improvement of similar programs? Please be as specific as possible.

ERIC Clearinghouse
AUG 21 1972
on Adult Education

THANK YOU!

58275